

### Remarks

Reconsideration of the application and allowance of all pending claims are respectfully requested. Claims 1-34 remain pending.

In the Office Action, dated January 21, 2005, claims 1-2, 5, 10-12, 15, 20-24, 27 and 33-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement and under 35 U.S.C. 112, second paragraph, as being indefinite. Further, claims 1-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burk et al. (UNIX System Administrator's Edition, 1997) in view of Deitel et al. (C & C++ Multimedia Cyber Classroom, 1996). Applicants respectfully, but most strenuously, traverse these rejections for the reasons herein.

#### 35 U.S.C. 112

Claims 1-2, 5, 10-12, 15, 20-24, 27 and 33-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Specifically, it is indicated in the Office Action that dynamically defining does not appear to be supported in the specification. Applicants respectfully disagree.

Applicants respectfully submit that the cited sections of the specification (e.g., page 6, paragraph 18, lines 11-14; page 6, paragraph 20; page 10, paragraph 26, lines 6-10; page 10, paragraph 27, lines 7-9; and page 10, paragraph 28, lines 3-8) indicate how the search is ever changing based on terms found in the text. Although the words dynamically defining are not specifically used in the specification, the flow diagram in FIG. 2 and the description on page 6 and subsequent pages shows how the search scope changes depending on what is located. The term dynamic is defined in Webster's Ninth New Collegiate Dictionary as "marked by continuous usu. productive activity or change." This change is explicitly taught in applicants' specification. For instance, as the computer encounters an item to be searched, it uses language specific rules to determine where to search for that item. Further, if another item is encountered during the search, then that item is also searched, etc. (see, e.g., FIG. 2; page 6, paragraph 20). Thus, applicants respectfully submit that dynamically defining is described in the specification in

such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Moreover, applicants respectfully submit that the exact language need not be provided in the specification for one skilled in the art to be able to understand the scope of the claim. This position is well supported by case law. For example, reference Purdue Pharma L.P. v. Faulding, Inc., 230 F.3d 1320, 1323 (C.A. Fed.; 2000); All Dental Prodx. LLC v. Advantage Dental Products, Inc., 309 F.3d 774, 779 (C.A. Fed.; 2002); and Tulip Computers Intern. B.V. v. Dell Computer Corp., 2002 WL 31870574 p. 2 (D. Delaware; 2002). Thus, withdrawal of the §112, first paragraph, rejection is respectfully requested.

Additionally, in the Office Action, it is indicated that claims 1-2, 5, 10-12, 15, 20-24, 27 and 33-34 are further rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Applicants respectfully disagree.

Applicants respectfully submit that the claims recite what applicants believe is their invention. For instance, the claims recite a new search technique that is more effective than those previously known. Applicants' search technique enables items associated with the computer program in which identified text is to be searched to be dynamically defined by the program, as described in the claims and as described in the specification. Thus, Applicants respectfully submit that their claims are definite under 35 U.S.C. 112.

Further, applicants respectfully request that if there is a particular reason why the claims are believed indefinite that this reason be provided to applicants.

Based on the foregoing, applicants respectfully request withdrawal of the 35 U.S.C. 112 rejections.

### 35 U.S.C. 103

Claims 1-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burk in view of Deitel. Applicants respectfully, but most strenuously, traverse this rejection for the reasons herein.

Applicants' invention is directed, in one or more aspects, to targeted searching for text of a computer program. The search is targeted at specific items, such that only the specific items are searched. Further, the search may be targeted at specific locations that are to be searched for the items. The specific items and/or locations to be searched are designated by the computer program itself, rather than by a user. Further, the items and/or locations to be searched are dynamically defined by the program, in that the search is dynamically revised based on information obtained during the search. By targeting the search, the chances of obtaining false positives are reduced and the search is less time consuming.

The searching being performed is to learn more about referenced, but undefined, text in a computer program. This is useful in debugging and/or in attempting to update or understand a program. There are search tools available that perform searching, as recognized by applicants and the Examiner (e.g., FIND or Grep); however, these tools are inefficient and use a different technique than that claimed by applicants, as described in further detail below.

It is indicated in the Office Action that applicants' invention is taught by the combination of Burk and Deitel. First, applicants respectfully submit that the combination of Burk and Deitel is improper, and second, *assuming arguendo*, the combination is proper, the combination fails to teach or suggest one or more aspects of applicants' claimed invention.

Applicants respectfully submit that the combination of Burk and Deitel is improper, since at the very least, there is no teaching or suggestion in the references themselves to make the combination or modification suggested in the Office Action. It is well known that:

It is insufficient to establish obviousness that the separate elements of the invention existed in the prior art; absent some teaching or suggestion, in the prior art to combine the elements. Arkie Loures Inc. v. Gene Larew Tackle Inc., 43 U.S.P.Q. 2d 1294, 1297 (Fed. Cir. 1997).

Applicants respectfully submit that there is no such teaching or suggestion in the references. Any justification for the combination provided in the Office Action does not indicate where the references expressly teach the combination. Instead, the combination or suggested modification appears to be a hindsight reconstruction of applicants' invention. That is, the justification is simply a selection of various elements of the combination in an attempt to create

applicants' invention, rather than a reason for the combination drawn from the references or from the knowledge available to one of ordinary skill in the art.

Applicants respectfully submit that one skilled in the art, previous to applicants' invention, did not contemplate dynamically defining by the computer program itself where to search for text, as claimed by applicants (e.g., claim 1). This is clear in the fact that none of the search tools, such as Grep or FIND or other searching tools available at the time, included such a technique. To combine compiling techniques with searching techniques, as proposed in the Office Action, is mere hindsight reconstruction of applicants' invention. Thus, the combination is improper.

In addition to the above, applicants respectfully submit that neither Burk nor Deitel, either alone or in combination, teach or suggest one or more features of applicants' claimed invention.

In one particular example, applicants claim a method of facilitating searching for text of computer programs (e.g., independent claim 1). The method includes, for instance, identifying text of a computer program to be searched; and dynamically defining by the computer program one or more items associated with the computer program in which to search for the text. Thus, in this aspect of applicants' claimed invention, a searching technique is provided in which the computer program dynamically defines the items in which to search for the identified text. This is very different from Burk and Deitel, either alone or in combination.

While Burk describes Find and Grep commands, which are used to search files for selected text, the Find and Grep commands are very different from applicants' claimed invention. For instance, those commands require a user to specify the search criteria, which is quite different from applicants' claimed invention, in which it is the computer program itself that dynamically defines where the search is to be performed. Take the following sample C or C++ program:

#### SAMPLE PROGRAM

```
#INCLUDE<myclass.h>
#include<stdio.h>

INT MAIN () {
PRINT ("hello world\n");
VARIABLE X = 17;
FUNCTIONCALLY=();
}
```

As one example, assume the sample program is executed on a machine having the following environment variable:

```
INCLUDE=C:\IBMCPPI\INCLUDE;C:\CLASSLIB\INCLUDE;
E:\RICK\INCLUDE;
```

In this example, the identified text (e.g., FunctionCallY) is only searched, in accordance with an aspect of the present invention, in the selected files (e.g., source.c, myclass.h and stdio.h) in the following chosen directories: C:\IBMCPPI\INCLUDE; C:\CLASSLIB\INCLUDE; and E:\RICK\INCLUDE. Other files and/or directories are not searched.

The search is defined by the #include statements of the computer program, rather than by a user specifying search criteria. By having the computer program define the search, the search may be revised (e.g., expanded) to include other targeted items or locations to be searched, as the search progresses. This is very different from Burk, as well as Grep and Find commands.

Grep and Find allow user defined arguments to be specified to help limit the scope of what is searched, such that the results are narrowed. However, Grep and Find have no way of dynamically defining (e.g., enlarging) the scope of the search by the computer program itself, as in applicants' claimed invention. Because the Grep and Find tools have no real concept of what they are searching, other than it being raw data, Grep and Find start with a large amount of objects to search and use arguments to limit which objects are searched. In contrast, applicants' claimed invention starts with a small set of objects and expands it dynamically to encompass other small sets through understanding of where to look based on knowledge of the object it is searching. This dynamic defining is by the computer program itself.

If Find or Grep was used to search on a method or function, the search would result in many incorrect matches, because neither Find nor Grep understands the difference between a function/method call and a function/method declaration or even a function/method prototype. Furthermore, if Find or Grep was used to find documentation on the same function/method, it would not understand the man pages or help files or pdfs or html to know how to find just the place that it is documented (no concept of indexes). It would show all of the references to function/method, as well as any supporting documentation. This is very different from applicants' claimed invention, in which the search is targeted and dynamically defined by the program to reduce false positives.

Deitel does not overcome the deficiencies of Burk. Deitel is directed to preprocessing and compiling, and not to search tools and techniques, like Grep, Find and applicants' claimed invention. There is no description in Deitel of the search tools of Burk and how they could be modified or enhanced.

Applicants respectfully submit that the combination of Burk and Deitel at the most teaches that search tools require user involvement and compiling is more directive oriented. There is no teaching or suggestion of applicants' claimed feature of in searching, dynamically defining by the computer program one or more items associated with the computer program in which to search for the identified text. Thus, applicants respectfully submit that their invention is patentable over the combination of Burk and Deitel.

For all of the above reasons, applicants respectfully request an indication of allowability for independent claim 1, as well as the other independent claims. Further, the dependent claims are patentable for the same reasons as the independent claims, as well as for their own additional features.

If a telephone conference would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone her at the number provided.

Respectfully submitted,

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